

REMARKS

Specification Objection

A substitute specification is provided with and without markings, along with an accompanying statement. Consequently, Applicants respectfully submit that the objections to the specification be withdrawn.

Claim Objections and Rejections

Claim 36 is objected, and claims 23-45 are rejected as allegedly being unpatentable under 35 U.S.C. §112, first and second paragraphs and as allegedly being anticipated under 35 U.S.C. §102 by U.S. Pub. No. 2002/0192141 A1 (Little).

Amended Claims and Traversal of Rejections

By this Amendment, Applicants have amended claims 36 and 38 to overcome the claim objection and rejection as discussed below.

With respect to the claim objection, Applicants have amended this claim to remove this objection to facilitate prosecution, and as such, respectfully submit that this amendment be entered. However, Applicants do not concede that electrochemically plating consists only of electroplating and electroless plating. There may be other processes, now and in the future, that would be encompassed by electrochemically plating, but not be considered electroplating and electroless plating.

With respect to the rejections under 35 U.S.C. §112, second paragraph, Applicants are their own lexicographers. They can define their invention essentially in whatever terms they choose so long as the terms are not used in ways that are contrary to accepted meanings in the art. (MPEP §2173.01). Moreover, Examiners should allow claims which define the patentable subject matter with a reasonable degree of particularity and distinctness. Some latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the examiner might desire (MPEP §2173.02).

With respect to the terms "encapsulated" and "transfer printing", the essential inquiry pertaining to this requirement is whether claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity, so one

of skill in the art can readily understand the metes and bounds of the claims. The Action fails set out where this claim terminology is inconsistent with the specification or prior art to create an unreasonable degree on uncertainty. See MPEP §2173.03.

With respect to the term "transfer printing", claim 33 is consistent with the specification at page 7.

With respect to claim 37, Applicants agree with the Examiner that both the terms "said coating" and "said substrate" have antecedent basis. As for the introduction of the terms "with a metal salt", nothing in MPEP §2173.05(e) indicates that the introduction of "a metal salt" would raise a rejection under 35 U.S.C. §112, second paragraph. Rather, this claim can be reasonably ascertained by those of skill in the art, and this is all that is required to satisfy 35 U.S.C. §112, second paragraph.

With respect to claim 38, Applicants have amended this claim to overcome the rejection under 35 U.S.C. §112, first paragraph, but do not concede to the basis of the rejection under 35 U.S.C. §112, second paragraph. However, Applicants have eliminated the rejected terminology to facilitate prosecution and entry of this amendment.

With respect to claims 39-41, the specification at page 6, lines 12-15 discloses applying the additive and catalyst to the surface of the substrate and etching the substrate. The additive and catalyst are being etched on the substrate, and the specification refers to such a combination as "the substrate". Moreover, the specification at page 7, lines 26-27 discloses, "the surface patterning of the **substrate**". Emphasis added. So, there is a reasonable basis in the specification for this terminology in claims 39-41. Thus, this terminology is in compliance with 35 U.S.C. §112, second paragraph.

With respect to claim 44, an amine of methane includes mono-, di-, and trimethylamines.

In view of the above, Applicants respectfully submit that these rejections should be withdrawn.

As discussed in Applicants last reply with respect to the rejections under 35 U.S.C. §112, first paragraph as failing to comply with the enablement requirement, it is improper to conclude that a disclosure is not enabling without considering all relevant factors, including the presence or absence of working examples. See, e.g.,

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pages 8-9 of the present specification. This alone should provide sufficient evidence that the application would enable one skilled in the art to practice the invention without undue experimentation. It should be noted that proof of enablement will be required only where adequate reasons are advanced by the examiner to establish that a person skilled in the art could not use the invention without undue experimentation. See, e.g., *In re Marzocchi*, 439 F.2d 220, 169 U.S.P.Q. 367 (CCPA 1971). The *Marzocchi* court held that a recitation in the specification "must" be taken as sufficient unless the PTO could advance "reasons or evidence" as to the untruthfulness of the assertion. The Action's assertion that the disclosure "appears" to provide a nano-particle upon which the carbon-based structures grows does not meet this standard. The specification clearly discloses a method for controlling magnetic alloy-encapsulated carbon-base nanostructures. See, e.g., page 8, lines 14-15. Moreover, see the attached article authored by Kuo et al. entitled, "Feasibility studies of magnetic particle-embedded carbon nanotubes for perpendicular recording media" in *Diamond and Related Materials* 12 (2003) 799-805. Thus, Applicants respectfully submit that these rejections should be withdrawn.

With respect to the rejections alleging that the claims lack support under 35 U.S.C. §112, first paragraph, Applicants respectfully submit that support exists at least as follows:

Claim	Support in Original Specification
23	Last paragraph at page 4 and claim 1
24	Claim 2
25	Claim 3
28	Claim 6
29	Claim 7
33	Claim 11
34	Claim 12
35	Claim 13
36	Claim 14
37	Claim 15
38	Claim 16
39	Claim 17
40	Claim 18
41	Claim 19
42	Claim 20
43	Claim 21
44	Page 8, lines 8-11 and Claim 22
45	Claims 3 and 4

Specifically, support for claim 23 can be found in the specification at page 4 that discloses applying a magnetic field by electron cyclotron resonance chemical vapor deposition during magnetic alloy-encapsulated nanostructure deposition and post treatment. Claim 23 defines a “microwave plasma electron cyclotron resonance chemical vapor depositing” that would include the application of a magnetic field as disclosed at page 4. Regarding claim 44, the specification discloses, “ammonia-base compound mixture of methane, ethane, propane, acetylene, benzene and mixture thereof.”

The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement. Accordingly, a rewording of a passage where the same meaning

remains intact is permissible. *In re Anderson*, 471 F. 2d 1237, 176 USPQ 331 (CCPA 1973) and MPEP §2163.07. As an example, the phrase, "... said catalyst and said additive are selected from the group consisting of magnetic metal and alloy" as defined by claim 2 is not closed language. Thus, the written description as provided above would clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed as defined by the present claims. *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) and MPEP §2163.02.

Regarding claim 38, claim 38 has been amended to comply with suggestions raised by the Examiner to remove the rejection. Consequently, Applicants respectfully submit that this amendment should be entered to facilitate prosecution.

With respect to the claim rejections under 35 U.S.C. §102, Little discloses a catalytic chemical vapor deposition process. Little fails to teach a microwave plasma electron cyclotron resonance chemical vapor depositing at a power of 500 W – 5000 W and a working pressure of less than 5×10^{-3} Torr (relevant to claim 23) and a catalyst comprising lanthanide or an alloy thereof (relevant to claim 27). Consequently, Applicants respectfully submit that these rejections should be withdrawn.

It is axiomatic in U.S. patent law that, in order for a reference to anticipate a claimed structure, it must clearly disclose each and every feature of the claimed structure. Applicants submit that it is abundantly clear, as discussed above, that Little does not disclose each and every feature of Applicants' claims and, therefore, could not possibly anticipate these claims under 35 U.S.C. § 102. Absent a specific showing of these features, Little cannot be said to anticipate any of Applicants' claims under 35 U.S.C. § 102.

It is further submitted that Little does not disclose, or suggest any modification of the specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicants' claimed structure. Thus, it is not believed that Little renders obvious any of Applicants' claims under 35 U.S.C. § 103.

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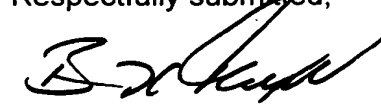
Summary

In view of the foregoing amendments and remarks, Applicants submit that this application is now in condition for allowance and such action is respectfully requested. Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicants' local attorney be contacted at the exchange listed below.

Respectfully submitted,

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